HDMI Extender with hub User's manual

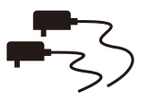
IMPORTANT SAFETY INSTRUCTIONS

1.Do not mix up transmitter TX and receiver RX before installation.
2.Use DC5V power supply only. Make sure specification matched if using adapters not supplied by factory.
3.Do not access external network.

Ⅰ. PACKAGE CONTENTS

HDMI to Lan sender TX*1pcs

Lan to HDMI receiver RX*1pcs



DC5V1A*2pcs

User's manual*1pcs

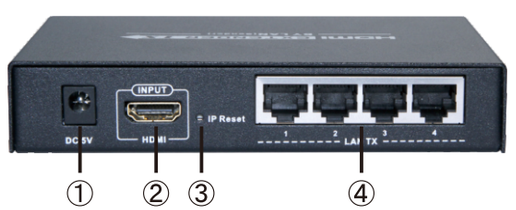
Ⅱ. INSTALLATION REQUIREMENTS

1.HDMI source device(computer graphics card, DVD,PS3, HD monitoring equipment etc.)
2.SDTV, HDTV, projector with HDMI port.
3.UTP/STP cat5e/6 cable
4.The max network cable length supported between Lan switch and TX/RX connection:

- CAT5 80m
- CAT5E 100m
- CAT6 120m

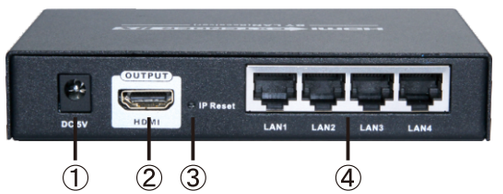
Ⅲ. Interfaces

1. TX rear panel



①DC5V: Power input
②HDMI in: HDMI input
③IP reset: Long press 5S and resort IP address to factory setting
④LAN1-LAN4: Network signal output, connect with 4 RXs simultaneously.

2. RX rear panel



①DC5V: Power input
②HDMI Out: HDMI output
③IP reset: Long press 5S and resort IP address to factory setting
④LAN1—LAN4: Any of the LAN port has signal input, the other LAN ports output the same network signal and cascade more RXs.

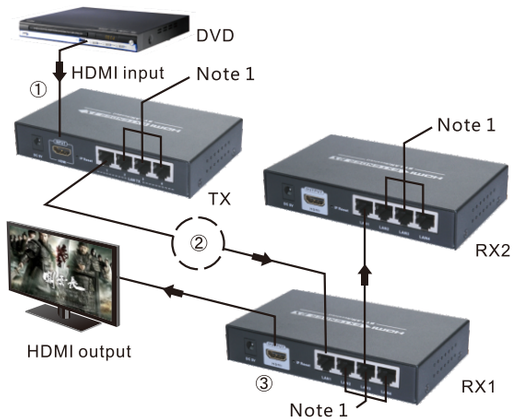
3. Front panel

①RS232
②Power indicator
③LAN1-LAN4: Network connection indicator
Slow blink: Network connection
Fast blink: Data is transmitting
④Reset: Press to reset

Ⅳ. INSTALLATION PROCEDURES

1.Cat5e/6 network
Follow the standard of IEEE-568B:
1-Orange/white 2-Orange
3-Green/white 4-Blue
5-Blue/white 6-Green
7-Brown/white 8-Brown

2.Connections



①TX connects with HDMI input signal and supports 4 ways LAN simultaneous output.
②Connect with network switch to extend signal.
③HDMI output of RX connects with HD display or other HDMI devices
Note 1: connect with multiple RXs at the same time to achieve identical and synchronized display.

Ⅴ. RS232 features

1.This product offers standard RS232 Path, only for practical project RS232 communication and cannot control product.
2.RS232 is full duplex communication path, baud rate is 115200bps by default and it can be modified as per requirements. Please refer to Ⅵ. Part for modify procedure.
3.RS232 usage
RS232 sends data in the way of "destination IP address (hexadecimal)+data (ASCII code). RX side will shield IP address and send data through RS232. Check below diagram about the usage:

	IP address	IP address hexadecimal
TX	192.168.168.55	C0 A8 A8 37
RX1	192.168.168.56	C0 A8 A8 38
RX2	192.168.168.58	C0 A8 A8 3A

1)TX send data to RX2 （RX2 IP address+ASCII code data）
TX RS232 port input: C0 A8 A8 3A 30 31 32
RX2 RS232 port output: 30 31 32 (ASCII corresponding decimal data: 0 1 2)
2)RX2 send data to RX1 （RX1 IP address+ASCII code data）
RX2 RS232 port input: C0 A8 A8 38 33 34 35
RX1 RS232 port output: 33 34 35 (ASCII corresponding decimal data: 3 4 5)
3)RX1 send data to TX （TX IP address+ASCII code data）
RX1 RS232 port input: C0 A8 A8 37 41 42 43
TX RS232 port output: 41 42 43 (ASCII corresponding decimal data: A B C)

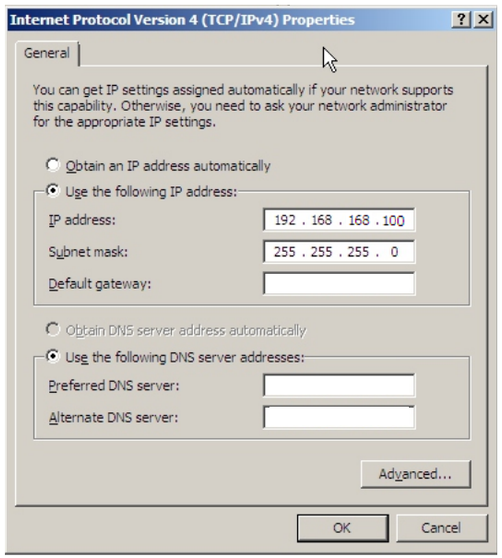
Ⅵ. Modify IP&MAC address and RS232 baud rate

Product factory setting by default		Setting notes
TX IP address	192.168.168.55	It will not influence product normal work when connecting to 6 or 7 products if not changing IP address. Please note TX and RX have to be in the same network segment and have different IP and MAC address.
RX IP address	192.168.168.56	
TX MAC address	00:0b:78:00:60:01	It will not influence product normal work and not suggest to change.
RX MAC address	00:0b:78:00:60:02	
Uart settings	115200bps	Can be modified to 1200,2400, 4800,9600,19200,28800, 38400,43000,57600,115200

System module has built in HTTP server. Can modify IP, MAC address and RS232 baud rate according to webpage.
Long press IR reset 5S can restore the above parameters to default factory setting.

Setting procedure as below:

1.Set PC's IP network segment the same with TX/RX's IP segment, such as 192.168.168.100. Take win7 for example: Control Panel-All Control Panel Options-Network and sharing center-Local network connection-Property-Internet Protocol Version 4

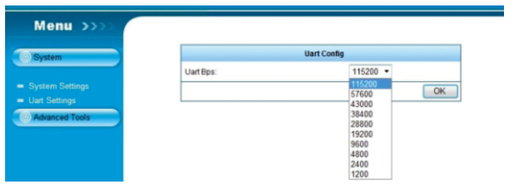

Internet Protocol Version 4 (TCP/IPv4) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 192 . 168 . 168 . 100
Subnet mask: 255 . 255 . 255 . 0
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

2. Connect PC net port with TX or RX net port directly. Power the system to connect PC and TX or RX through.

3.Input TX(192.168.168.55) or RX(192.168.168.56) IP address to IE address bar and enter into control page.

1)Click system on the page left menu bar, then can modify IP and MAC address in switch information page.

2)Click Uart settings to modify RS232 baud rate.



VI. RFQ

Q1: TV screen is black and OSD display " searching TX" on top left corner.

A1: Check TX and lan switch power status and network cable connection.

Q2: TV screen is black and OSD display "Check TX's input signal"?

A2: Check if the TX has HDMI signal input. Change HDMI cable to retest.

Q3: The Lan port yellow indicator led does not light?

A3: Check the network cable quality and connection.

Q4:Video is stuck and unstable?

A4:Check if the network cables are too tong between all level cascade.

Q5: Have already modified IP address and need to modify again, but forget the modified IP address and unable to enter into webpage?

A5: Long press the IR reset button for 5s and can restore IP and MAC to default factory setting.

Q6: Product can not work normally after changing IP address?

A6: IP setting may fail. Long press IR reset button for 5S to restore IP address to default factory setting and change to a new IP address. Make sure the IP of these RXs and TXs connecting to the same network is in the same network segment.

VII.SPECIFICATION

Items	Specifications
Power supply	DC5V1A
Support input resolution	480i@60Hz,480p@60Hz,576i@50Hz, 576p@50Hz,720p@50/60Hz, 1080i@50/60Hz,1080p@50/60Hz;
Support output resolution	480p@60Hz, 576p@50Hz,720p@50/60Hz, 1080p@50/60Hz;
Support HDMI graphics resolution	640x480@60Hz;800x600@60Hz; 1024x768@60Hz;1280x720@60Hz; 1280x768@60Hz;1280x1024@60Hz; 1360x768@60Hz;1366x768@60Hz; 1400x1050@60Hz;1440x900@60Hz; 1680x1050@60Hz;1920x1080@60Hz
Audio sample rate	44.1kHz, 48KHz
Video Compressing Format	M-JPEG
Transmission Protocol	Standard TCP/IP, it's with good compatibility of network equipment and good for network transmission and extension.
Transmission delay	Within 70ms for direct connection with TX and RX.
Network cable	UPT/STP cat5e/6
Network cable length between all connections	CAT5: ≤80m CAT5E: ≤100m CAT6: ≤120m
RS232 Path	Offer standard full duplex RS232 transmission path, baud rate can be modified.
Support LAN bandwidth	≥100M
Network data transmission rate	Up to 80MHz at the highest resolution.
Power consumption	Tx: 3.5W; Rx: 3W at the highest resolution
Working temperature	-10℃~45℃
Storage temperature	-20℃~80℃
Working humidity	10%-80% RH (not solidified)
Storage humidity	5%-90% RH (not solidified)
Product dimension	LxWxH: 140x85x27(mm)

Declaration

The product name and brand name may be registered trademark of related manufacturers.TM and ® may be omitted on the user manual. The pictures on the user manual are just for reference,and there may be some slight difference with the real products.

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